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THE MOTION OF *η CEPHEI* IN THE LINE OF SIGHT.

By W. W. Campbell.

In the course of our determinations of stellar velocities in the line of sight, I have found that the star *η Cephei* has a very great velocity toward the solar system. Four spectrum plates of this star have been secured and measured by Mr. Wright and myself. They yield the following velocities in kilometers per second:—

— 87.6
— 87.2*
— 86.2
— 86.9
— 86.2

Mean — 86.8

The equivalent in English miles is — 53.9.

The motion of *η Cephei* at right angles to the line of sight is about 0.8 second of arc annually.

We have confirmed the results† obtained by Dr. Belopolsky, at Pulkowa, for the star *ζ Herculis*. Our results from four plates, together with those previously obtained by Dr. Belopolsky from seven plates, are as follows:—

	Belopolsky.	Campbell.
	— 68 km.	— 69.1 km.
	— 84	— 70.4
	— 75	— 70.0
	— 67	— 71.1‡
	— 66	— 70.9
	— 64	
	— 69	
Means	— 70 km.	— 70.3 km.

The equivalent result in English miles is — 43.7.

It should be noticed that these stars are situated in the part of the sky toward which the solar system is moving, and the above results are the sums of the stars' motion toward our system, and of our system toward them. If we assume that the solar system is moving toward the point in the sky whose Right Ascension is 267° and whose Declination is + 31°, with a velocity of 17 kilometers per second, then the solar components toward η *Cephei* and ζ *Herculis* are respectively 12.7 and 16.4 kilometers per second. Applying these corrections, the velocities of these stars with reference to the sidereal system become—

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* Measure of the same plate by Mr. Wright.

† Published in *Astronomische Nachrichten*, No. 3184.

‡ Measure of the same plate by Mr. Wright.

for η *Cephei*, — 74.1 km. per second.
for ζ *Herculis*, — 53.9 km. per second.

Their equivalents in English miles are —46.0 and — 33.5.

(THIRTIETH) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to E. F. Coddington, Fellow in Astronomy at the Lick Observatory, for his discovery of an unexpected comet on June 11, 1898.

The Committee on the Comet-Medal,
James E. Keeler,
Wm. M. Pierson,
Chas. Burckhalter.

August 11, 1898.

(THIRTY-FIRST) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to C. D. Perrine, Assistant Astronomer in the Lick Observatory, for his discovery of an unexpected comet on June 14, 1898.

The Committee on the Comet-Medal,
James E. Keeler,
Wm. M. Pierson,
Chas. Burckhalter.

August 14, 1898.

(THIRTY-SECOND) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to E. Giacobini, of the Observatory, Nice, France, for his discovery of an unexpected comet on June 18, 1898.

The Committee on the Comet-Medal,
James E. Keeler,
Wm. M. Pierson,
Chas. Burckhalter.

August 18, 1898.